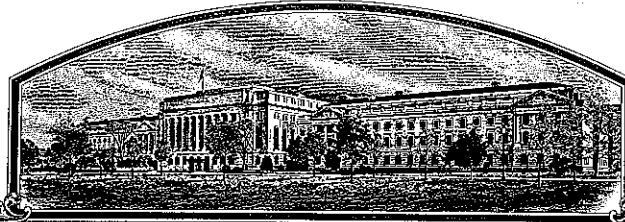


No.

9900404



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Board of Regents, University of Nebraska

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE VARIETY (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Culver'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-ninth day of February, in the year of our Lord two thousand.

Attest:

For Marie L. Lusk

Samuel H. Hildner

Commissioner
Plant Variety Protection Office
A. B. 1999 1. 2

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Board of Regents, University of Nebraska		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME NE93554	3. VARIETY NAME Culver
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) Lincoln, NE 68583-0745		5. TELEPHONE (include area code) 402-472-7211	<div style="border: 1px solid black; padding: 5px;"> FOR OFFICIAL USE ONLY PVPO NUMBER 9900404 FILING DATE 8-30-1999 </div>
		6. FAX (include area code) 402-472-7904	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Corporation	8. IF INCORPORATED, GIVE STATE OF INCORPORATION Nebraska	9. DATE OF INCORPORATION February 15, 1869	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Dr. Darrell W. Nelson, Dean and Director Agricultural Research Division, IANR-UNL Lincoln, NE 68583-0704			<div style="border: 1px solid black; padding: 5px;"> FILING AND EXAMINATION FEES: F E E S \$ 2450.00 R E C E I V E D DATE 8/30/1999 CERTIFICATION FEE: \$ 300 DATE 1-11-00 </div>
11. TELEPHONE (include area code) 402-472-2045	12. FAX (include area code) 402-472-9071	13. E-MAIL DNELSON1@unl.edu	14. CROP KIND (Common Name) Bread Wheat
15. GENUS AND SPECIES NAME OF CROP Triticum aestivum L.		16. FAMILY NAME (Botanical) Graminae	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act <input checked="" type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input type="checkbox"/> NO (If "no," go to item 22)	
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		21. IF "YES" TO ITEM 20, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED	
24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	

SIGNATURE OF OWNER Darrell W. Nelson for University of Nebraska Board of Regents		SIGNATURE OF OWNER _____	
NAME (Please print or type) Darrell W. Nelson		NAME (Please print or type) _____	
CAPACITY OR TITLE Dean and Director	DATE 8/19/99	CAPACITY OR TITLE _____	DATE _____

INSTRUCTIONS

0000404

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable, untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,450. *** (\$300 filing fee and \$2,150 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.)** Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$300 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvp.htm>

ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (*See Regulations and Rules of Practice, Section 97.103.*)
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filing date.

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

September 1999 - First sale of certified seed

September 1998 - First allocation of foundation seed of unreleased cultivar with intent to increase for public sale.

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (*See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.*)

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705. Telephone: (301) 504-8089.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Jamie L. Whitten Building, Washington, D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your letter. Under the PRA of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-2791. To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call (202) 720-7327 (voice) or (202) 720-1127 (TDD). USDA is an equal opportunity employer.

S&T-470 (6-98) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (03-96) which is obsolete.

Culver (P.I. 606726) Hard Red winter Wheat Application

Exhibit A. Origin and Breeding History

Culver was selected from the cross NE82419/'Arapahoe', which was made in 1987. The pedigree of NE82419 is 'Trapper'/'Comanche'/'Ottawa'/'3'/'CIMMYT line'/'Scout'/'4'/'Buckskin' sib/'Homestead'. The line designation of the CIMMYT (International Center for Maize and Wheat Improvement) line has been lost. The F₁ generation was grown in the greenhouse in 1988. The F₂ and F₃ generations were grown in bulk at the Agricultural Research and Development Center at Ithaca, Nebraska in 1989 and 1990, respectively. Random heads were chosen from the F₃ bulk and planted as head rows which were harvested in 1991. The F₃-derived F₅ family was harvested as a single observation plot in 1992. Culver was identified as NE93554 and was grown at six unreplicated locations in 1993. It has been tested in replicated trials at seven locations per year from 1994 to present. In addition, it was tested in the USDA northern Regional Performance Nursery in 1996 and 1997. The criteria for selection were: a) adequate winterhardiness for propagation in Nebraska, b) resistance to *Puccinia Graminis* (the causal agent of stem rust), c) agronomic performance equal to or superior to commonly grown wheat varieties, and d) acceptable end-use quality (in this case for bread making). Culver was released primarily for its superior adaptation to dryland wheat production systems in southern and central Nebraska and similar growing areas in adjacent states. The initial allocation of Foundation Seed was made on September, 1998 to produce adequate quantities of certified seed (subject to release of the experimental line). Culver was named and officially released in April, 1999 by the Nebraska Agricultural Experiment Station and the Agricultural Research Service, U.S. Department of Agriculture. The first public sale of Certified seed will be in September, 1999.

Culver will be maintained by the Nebraska Agricultural Experiment Station with the following classes: Breeder, Foundation, Registered, and Certified. By agreement with the Nebraska Crop Improvement Certification standards, Registered seed is nonsalable. Breeder seed will be maintained by roguing Breeder Seed fields. The U.S. Department of Agriculture will not have seed for distribution.

In observations over six generations of selfing and during seed increase Culver has appeared stable and uniform. Less than 1.0 percent (1:100) of the plants were rogued from Foundation and Breeder seed fields. It is expected that less than 1.0 percent (1:100) variant plants (taller height, 7 to 17 cm taller) may be encountered in subsequent generations.

Exhibit B. Novelty Statement

To our knowledge, Culver most nearly resembles in appearance the hard red winter wheat cultivars, Alliance and Arapahoe, but can be distinguished by the following characteristics:

1. Culver is moderately resistant to leaf rust (caused by *P. recondita* Roberge ex Desmaz) and contains *Lr16* whereas Alliance does not contain *Lr16* and is susceptible (data provided by Don McVey, USDA-ARS Cereal Disease Laboratory).
2. Culver is moderately resistant to stem rust (caused by *Puccinia graminis* Pers: Pers.) and contains *Sr6* and *Sr24* whereas Alliance does not contain *Sr6* and *Sr24* (data

provided by Don McVey, USDA-ARS Cereal Disease Laboratory).

3. Culver is susceptible to the Great Plains Biotype of Hessian fly (*Mayetiola destructor* Say) and does not contain the "Marquillo-Kawvale" gene for resistance whereas Arapahoe does contain the "Marquillo-Kawvale" gene for resistance (data provided by Jim Hatchett, USDA-ARS and Kansas State University).
4. Culver has glabrous leaves whereas Arapahoe has pubescent leaves.

Exhibit C. See Attached Sheet.

Exhibit D. Additional Description of the Variety.

Culver is an awned, white-glumed cultivar. Its field appearance is most similar to 'Alliance', although not as yellow-green in color. After heading, the canopy is moderately open and upright. The flag leaf is erect and twisted at the boot stage. The foliage is green with a waxy bloom at anthesis. The leaves are glabrous. The spike is tapering in shape, moderately long to long, and middense. The glume is midlong and medium in width, and the glume shoulder is square. The beak is short in length with an acuminate tip. The spike is usually nodding at maturity. Kernels are red colored, hard textured, and elliptical in shape. The kernel has no collar, a large brush of medium length, rounded cheeks, midsize to large germ, and a narrow and shallow crease.

Culver was evaluated as NE93554 in Nebraska yield nurseries starting in 1994, in the Northern Regional Performance Nursery in 1996 and 1997, and in Nebraska cultivar performance trials in 1997 and 1998. In two years of testing in Nebraska cultivar performance trials, it performed extremely well in the south central and west central districts, while being competitive in the southeast and western sites. In the south central district trials (4 environments), Culver was the highest yielding line (4690 kg/ha). For comparison, 'Jagger' yielded 4610 kg/ha, Alliance yielded 4510 kg/ha, and Arapahoe yielded 4300 kg/ha in those trials. In the west central trials (12 environments in two years), Culver's yield (4310 kg/ha) was surpassed only by the yield of Quantum hybrid '7406' (4730 kg/ha) and 'Jules' (4390 kg/ha). For comparison, the yields of Jagger, 'Windstar', Alliance, 'Niobrara', and Arapahoe were 4260, 4240, 4160, 4160, and 4120 kg/ha, respectively. In the southeast district trials (4 environments), Culver yielded similarly to Niobrara (3510 kg/ha) and 340 kg/ha less than '2137', and 130 kg/ha less than 'Nekota'. In the western trials (12 environments), Culver was equal in yield to Arapahoe and 70 to 270 kg/ha less than Alliance, 'Akron', 2137, Niobrara and Windstar. Culver was tested in the Northern Regional Performance Nursery in 1996 and 1997 (29 environments). It ranked seventh of 16 lines tested at 10 locations in those years, was above the average yield, and 360 kg/ha higher yielding than 'Abilene'. In one or both years, it showed superior adaptation for use in the intra-regional production zones of the north-central plains, northern plains and the northern high plains. The main advantage Culver when compared to most other available wheat cultivars within its area of adaptation, is its high grain yield and superior leaf rust resistance in dryland production systems.

Culver is medium in maturity, about 0.5 d later flowering than Arapahoe and 2 d later than Alliance. It has a medium length coleoptile, similar to 'TAM 107' and Arapahoe, but shorter than 'Pronghorn'. The mature plant height of Culver (83 cm) is similar to Arapahoe, but

2 cm taller than Alliance. Culver has moderately strong straw strength, similar to Windstar and slightly better than Alliance, Arapahoe, and Pronghorn. The winterhardiness of Culver is good to very good, similar to Abilene and comparable to other winter wheat cultivars adapted and commonly grown in Nebraska.

Culver is moderately resistant to stem rust (caused by *Puccinia graminis Pers : Pers.*; containing *Sr6* and *Sr24*) and leaf rust (caused by *P. recondita* Roberge ex Desmaz containing *Lr16*), and susceptible to wheat soilborne mosaic virus, Hessian fly (*Mayetiola destructor* Say), barley yellow dwarf virus, and wheat streak mosaic virus. Culver has a moderately low grain volume weight, higher than Alliance, but lower than Arapahoe, Pronghorn, and Windstar. The milling and baking properties of Culver were determined for five years by the Nebraska Wheat Quality Laboratory. In these tests, Arapahoe and 'Scout 66' were used as check cultivars. The average wheat protein content of Culver was similar to Arapahoe and Scout 66. The average flour extraction on the Buhler Laboratory Mill for the Culver was similar to Arapahoe, but less than Scout 66. The flour ash content was similar to the check varieties. The average flour protein content was less than the check varieties. Dough mixing properties of Culver were similar to Arapahoe and stronger than Scout 66. Average baking absorption was similar to the check varieties. The average loaf volume of Culver was less than the check cultivars. The scores for the internal crumb grain and texture were good or very good, which were superior to Arapahoe and Scout 66. In comparison to Alliance, Culver had a higher average wheat protein content, baking absorption, and crumb grain and texture score. The overall end-use quality characteristics for Culver should be acceptable to the milling and baking industries.

The name Culver was chosen in recognition of Moses M. Culver whose farm was purchased on June 25, 1874 by the University of Nebraska as a site for agricultural research and teaching. This site eventually became the University of Nebraska-Lincoln's East Campus. The year 1999 will be the 125th anniversary of this event, marked by the availability of high quality Nebraska certified seed of this new variety to wheat producers, resulting from a long-standing commitment to meet the needs of agriculture and the world. East Campus is the home for the Institute of Agriculture and Natural Resources with its associated divisions of research, teaching, extension, and service, which is celebrating its 25th anniversary.

Exhibit E. Statement of the Basis of the Applicant's Ownership

The University of Nebraska is the applicant for protection in the case of Culver hard red winter wheat being the variety for which Plant Variety Protection is hereby sought was developed by Drs. P.S. Baenziger and D. Shelton, employees of the University of Nebraska and C. J. Peterson, an employee of the USDA-ARS. By agreement between employees of the University of Nebraska and by agreement between USDA-ARS and the University of Nebraska, all rights to any variety made by employees while employed by the University of Nebraska or by the USDA-ARS employees stationed at the University of Nebraska are assigned to the University of Nebraska, with no rights of any kind to Culver being retained by the employees.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

BELTSVILLE, MARYLAND 20705

EXHIBIT
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S)

Board of Regents, University of Nebraska

ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code)

Lincoln, NE 68583-0745

FOR OFFICIAL USE ONLY

PVPO NUMBER 9900404

VARIETY NAME

TEMPORARY OR EXPERIMENTAL
DESIGNATION

9900404

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. or) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____

Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

1

1=Common

2=Durum

3=Club

4=Other (SPECIFY) _____

2. VERNALIZATION:

2

1=Spring

2=Winter

3=Other (SPECIFY) _____

3. COLEOPTILE ANTHOCYANIN:

1

1=Absent

2=Present

4. JUVENILE PLANT GROWTH:

1

1=Prostrate

2=Semi-erect

3=Erect

5. PLANT COLOR (boot stage):

2

1 = Yellow-Green

2 = Green

3 = Blue-Green

6. FLAG LEAF (boot stage):

1

1 = Erect

2 = Recurved

2

1 = Not Twisted

2 = Twisted

7. EAR EMERGENCE:

0 4

Number of Days Earlier Than Roughrider

1997 NRPN DATA

0 0

Number of Days Later Than Abilene

1997 NRPN DATA

8. ANTHOR COLOR:

1

1 = YELLOW

2 = PURPLE

9. PLANT HEIGHT (from soil to top of head, excluding awns):

1 1

cm Taller Than Abilene

1 4

cm Shorter Than Roughrider

10. STEM:

A. ANTHOCYANIN

☒ 1 1=Absent 2=Present

B. WAXY BLOOM

☒ 2 1=Absent 2=Present

C. HAIRINESS (last internode of rachis)

☒ 1 1=Absent 2=Present
D. INTERNODE (SPECIFY NUMBER) 4
☒ 1 1=Hollow 2=Semi-solid 3=Solid

E. PEDUNCLE

☒ 2 1=Absent 2=Present

☐ cm Length

99 AUG 30 P.3.30

RECEIVED
USDA-AMS-PVFO

11. HEAD (at Maturity):

A. DENSITY

☒ 2 1=Lax 2=Mid-dense 3=Dense

B. SHAPE

☒ 1 1=Tapering 2=Strap 3=Clavate 4=Other (SPECIFY) _____

C. CURVATURE

☒ 3 1=Erect 2=Inclined 3=Recurved

D. AWNEDNESS

☒ 4 1=Awnless 2=Apically Awnletted 3=Awnletted 4=Awned

12. GLUMES (at Maturity):

A. COLOR

☒ 1 1=White 2=Tan 3=Other (SPECIFY) _____

B. SHOULDER

☒ 4 1=Wanting 2=Oblique 3=Rounded 4=Square 5=Elevated 6=Apiculate

C. BEAK

☒ 3 1=Obtuse 2=Acute 3=Acuminate

D. LENGTH

☒ 2 1=Short (ca. 7mm) 2=Medium (ca. 8mm) 3=Long (ca. 9mm)

E. WIDTH

☒ 2 1=Narrow (ca. 3mm) 2=Medium (ca. 3.5mm) 3=Wide (ca. 4mm)

SEED:

A. SHAPE

☒ 3 1=Ovate 2=Oval 3=Elliptical

B. CHEEK

☒ 1 1=Rounded 2=Angular

C. BRUSH

☒ 2 1=Short 2=Medium 3=Long

D. CREASE

☒ 1 1=Width 60% or less of Kernel
2=Width 80% or less of Kernel
3=Width Nearly as Wide as Kernel

☒ 1 1=Not Collared 2=Collared

☒ 1 1=Depth 20% or less of Kernel
2=Depth 35% or less of Kernel
3=Depth 50% or less of Kernel

13. SEED: (continued)

E. COLOR

☒ 3

1 = White

2 = Amber

3 = Red

4 = Other (SPECIFY) _____

F. TEXTURE

☒ 1

1=Hard

2=Soft

G. PHENOL REACTION (see instructions):

☐

1 = Ivory

2 = Fawn

3 = Light Brown

4 = Dark Brown

5 = Black

14. DISEASE:

(0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

Stem Rust (*Puccinia graminis* f. sp. *tritici*)☒ 2

NRPN - 1997

Stripe Rust (*Puccinia striiformis*)☒ 1

NRPN - 1997

Tan Spot (*Pyrenophora tritici-repentis*)☒ 3

Field

Halo Spot (*Selenophoma donacis*)☐ 0

Septoria nodorum (Glume Blotch)

☐ 0

Septoria avenae (Speckled Leaf Disease)

☐ 0

Septoria tritici (Speckled Leaf Blotch)

☐ 0Scab (*Fusarium* spp.)☐ 0

"Black Point" (Kernel Smudge)

☐ 0

Barley Yellow Dwarf Virus (BYDV)

☒ 1

FIELD RACES

Soilborne Mosaic Virus (SBMV)

☒ 1

NRPN - 1997

Wheat Yellow (Spindle Streak) Mosaic Virus

☒ 3

FIELD

Wheat Streak Mosaic Virus (WSMV)

☒ 1

Sidney Isolate

Other (SPECIFY) _____

☐

Other (SPECIFY) _____

☐

Other (SPECIFY) _____

☐Leaf Rust (*Puccinia recondita* f. sp. *tritici*)☒ 3

FIELD

Loose Smut (*Ustilago tritici*)☐ 0Flag Smut (*Urocystis agropyri*)☐ 0Common Bunt (*Tilletia tritici* or *T. laevis*)☐ 0Dwarf Bunt (*Tilletia controversa*)☐ 0Karnal Bunt (*Tilletia indica*)☐ 0Powdery Mildew (*Erysiphe graminis* f. sp. *tritici*)☒ 1

FIELD RACES IN NEBRASKA

"Snow Molds"

☐ 0Common Root Rot (*Fusarium*, *Cochliobolus* and *Bipolaris* spp.)☐ 0Rhizoctonia Root Rot (*Rhizoctonia solani*)☐ 0Black Chaff (*Xanthomonas campestris* pv. *translucens*)☐ 0Bacterial Leaf Blight (*Pseudomonas syringae* pv. *syringae*)☐ 0

Other (SPECIFY) _____

☐

Other (SPECIFY) _____

☐

Other (SPECIFY) _____

☐

Other (SPECIFY) _____

☐

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15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

Exhibit C (Wheat) Pa.

PLEASE SPECIFY BIOTYPE (where needed)

Hessian Fly (*Mayetiola destructor*)

☒ 1 Great Plains Biotype

Other (SPECIFY) _____

☐

Stem Sawfly (*Cephus* spp.)

☒ 1 NRPN - 1997

Other (SPECIFY) _____

☐

Cereal Leaf Beetle (*Oulema melanopa*)

☐ 0

Other (SPECIFY) _____

☐

Russian Aphid (*Diuraphis noxia*)

☒ 1 Field

Other (SPECIFY) _____

☐

Greenbug (*Schizaphis graminum*)

☐ 0

Other (SPECIFY) _____

☐

Aphids

☐ 0

Other (SPECIFY) _____

☐

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

99 AUG 30 P3:30

REC'D
USDA-AIS-PVPD

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) Board of Regents University of Nebraska	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER NE93554	3. VARIETY NAME Culver
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) Lincoln, NE 68583-0745	5. TELEPHONE (include area code) 402-472-7211	6. FAX (include area code) 402-472-7904
7. PVPO NUMBER 9900404		
8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		

9. Is the applicant (individual or company) a U.S. national or U.S. based company? If no, give name of country	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
10. Is the applicant the original owner?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no, please answer one of the following:
a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)? <input type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country	
b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company? <input type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country	
11. Additional explanation on ownership (if needed, use reverse for extra space):	

SEE ATTACHED

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

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